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AUTHOR Dwyer, Edward J.; West, Russell F.
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ABSTRACT

A study investigated whether sustained silent reading encourages college students to increase their reading rate. Subjects were 76 education majors or students otherwise interested in teaching who were enrolled in an undergraduate course in teaching reading/language arts in a university in the southeastern United States. Subjects recorded their reading rate after reading for 15 minutes per day, five days per week, for five weeks. Results indicated a substantial increase in reading rate over the five week period and suggest a strong linear relationship between the number of weeks of participation in the sustained silent reading program and increase in reading rate. Further research is needed to determine if such gains appear permanent. (Contains 14 references and a figure of data.) (RS)

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Effects of Sustained Silent Reading on Reading Rate Among College Students

By

Edward J. Dwyer

Department of Curriculum and Instruction
East Tennessee State University

and

Russell F. West

Department of Educational Leadership and Policy Analysis
East Tennessee State University

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EFFECTS OF SUSTAINED SILENT READING ON READING RATE AMONG COLLEGE STUDENTS

Sustained silent reading (SSR), often referred to as normal and/or natural reading, is the process of reading for an uninterrupted period of time. SSR, in its most widespread application, is simply recreational reading wherein the reader reads primarily for enjoyment and/or to gain information. Teachers in classroom settings where SSR is undertaken designate a specified period of time for uninterrupted reading, usually longer for more competent readers than for poorer readers and younger children. The procedure is also used in college reading classes within programs designed to improve overall reading competencies.

Durkin (1993) strongly advocated including opportunities for reading substantial amounts of relatively easy material within the classroom. She recommended engagement with independent level material as a means to promote overall competence through: 1. consolidation of what readers have learned about reading, 2. promotion of comprehension of ideas rather than simply words and/or phrases, 3. awareness of need to adjust rate based on purposes for reading, 4. increasing knowledge of the world leading to greater comprehension, and 5. encouraging greater interest and desire to read resulting from increased self-confidence concerning reading ability. In a similar vein, Harris and Sipay (1990) advocated providing time for free reading in recreational settings as a means for promoting both the "quality and quantity of voluntary reading" (p. 657).

The literature is replete with empirical support for the

view that SSR encourages reading achievement. Among the notable studies is that of Nagy, Anderson, and Herman (1987) who demonstrated the positive effects of SSR, described by these researchers as normal reading, on vocabulary development. Morrow and Weinstein (1986) concluded, through an extensive research review, that SSR was highly valuable in promoting reading competence but, on the other hand, found school personnel mainly concerned with "literacy skills, whereas parents are left with the responsibility for conveying enjoyment of reading" (332).

A comprehensive review of research on sustained silent reading undertaken by Ekwall and Shanker (1989) provided considerable evidence further supporting the theory that SSR substantially enhances reading achievement. Gambrel (1978) proposed that "common sense notions about the reading process tell us that the independent reading skills are enhanced through daily practice in silent reading"(p.328). In addition to providing enjoyment, Burns, Roe, and Ross (1992) proposed SSR as an important means for encouraging reading competence through literature and for integrating literature with content area subject matter.

Durkin (1993) also made a strong case for implementing and maintaining a classroom environment wherein students have substantial opportunities to read "extended pieces of text" (p. 137). She proposed that such reading "moves attention away from individual words to the meaning of connected text" (p. 156); thus, promoting reading comprehension.

Enjoyment has traditionally been advocated as the major reason for initiating and maintaining sustained silent reading programs. However, in addition to promoting enjoyment, Ruetzel and Hollingsworth (1991) found fourth grade students gaining just as much in reading comprehension skills (noting details, drawing conclusions, determining sequence, and determining main idea) from independent reading (SSR) as equivalent groups gained from direct instruction in performing tasks requiring application of the target skills. These researchers randomly assigned students to three groups all of whom received the same 30 minutes of instruction in their basal reader program each day. However, for the remaining 30 minutes of the time allotted for reading instruction, Group A (n=20) engaged only in independent reading from books they selected, Group B (n=20) read independently from self-selected books for 15 minutes and received direct instruction in reading skills for 15 minutes, while Group C (n=21) received a full 30 minutes of reading skills instruction. The findings led Ruetzel and Hollingsworth to the conclusion that their study "provides evidence to support the allocation of more time spent reading in the intermediate grades without undue concern related to declining scores on criterion-referenced tests of reading comprehension skills" (p.174). This conclusion would no doubt prove to be at least somewhat startling to advocates of traditional skills-oriented reading programs while not surprising at all to proponents of sustained silent reading. While arguing the appropriateness and necessity of providing opportunities for children to read longer texts in a natural manner, Blachowicz and Lee (1991) chided reading teachers for the "time

squandered on isolated drill, management, and other activities of questionable instructional effectiveness" (p. 188).

Reading rate, defined by Ruetzel and Cooter (1992) as "the speed at which readers attempt to process text" (458), is likely one of the competencies enhanced through participation in SSR. While a generation of researchers have stressed the importance of flexibility relative to rate, Carver (1983) found college readers tending to read at virtually the same rate regardless of the difficulty level of the text for them. Consequently, increasing reading rate, in and of itself, appears highly desirable provided adequate levels of comprehension are maintained.

Dwyer and West (1989) determined that reading rate could be substantially increased through concentrated effort on the part of students simply to read faster. The subjects, 15 college students, were engaged in a timed reading program wherein they were required to read at 400 words per minutes to cover a specified amount of material. A timer was used but no artificial means were implemented. Over a six week period, subjects increased reading rate from a mean of 210 wpm to 348 wpm while maintaining approximately the same level of comprehension (78%).

Pauk (1989) denounced artificially designed speed reading programs in favor of a natural approach for enhancing rate while reading college level texts through "setting the stage for reading" (p. 339) by: 1. establishing a foundation by overviewing the text; 2 encouraging flexibility; 3.engaging ideas, not specific words; and 4. studying and enjoying the last paragraph since this is where authors

usually summarize and highlight the most important information. Pauk stressed the importance of obtaining information while not specifically attending to rate in an unnatural manner.

Brozo and Johns (1986) extensively reviewed research while examining 40 books wherein the authors presented information and strategies for transforming normal readers into speed readers. These researchers, like Pauk, found fault with programs and strategies designed to encourage great reading speeds. Brozo and Johns concluded that "the best empirical evidence we have today seems to place the limit at which even the most superior of readers can genuinely read somewhere between 300 and 600 wpm, and certainly no higher than 1,000 wpm" (245). In this light, Dwyer and West (1989), mentioned above, found a mean rate of 348 words per minute with adequate comprehension among college subjects after an intensive rate enhancement program. Also in this vein, O'Reilly and Walker (1990) comprehensively reviewed literature concerning reading rate among college students. They found little evidence supporting the contention that adequate comprehension could be maintained at reading rates "well in excess of 400 wpm" (p. 10). Further, these researchers found no value in using mechanical devises to artificially generate more rapid reading rates.

Nothing seems more natural than procedures such as sustained silent reading as a strategy for increasing rate while encouraging all other reading competencies as well. Increasing reading rate seems desirable in light of the massive amount of reading expected of college students.. Further, there is no evidence suggesting that slower rates tend to encourage comprehension when just the

opposite appears likely. That is, more rapid reading is likely to promote reading in thought units while slower reading lends itself to focusing on individual words. Pointing out the need among college students for increasing reading rate, Dwyer and West (1989), found incoming college freshmen in a reading improvement class reading at approximately 210 words per minute. A rate of 210 words per minute would make it difficult for these students to cover required material.

Overall analysis of the research suggests a relationship between reading substantial amounts of material and reading competence. While it is also entirely reasonable to hypothesize that SSR encourages reading rate, an extensive review of research provided no evidence concerning the relationship between SSR and rate. Consequently, the present study was undertaken.

Methods

The subjects were 76 college students in a university in the southeastern United States. All subjects were education majors or otherwise interested in teaching. The subjects were nearly all white females given the location of the school and the nature of course content, teaching reading in the elementary school. The subjects were also selected for convenience being enrolled in two classes taught by the first author. The subjects appeared representative of education majors in particular and college students in general. Complete data were available from 76 subjects while data from 20 subjects were eliminated because of missing information.

Subjects studied sustained silent reading as an instructional system for encouraging growth in reading competence as part of an undergraduate course in teaching reading/language arts. The subjects participated in SSR within the class to reinforce ideas discussed and presented. A more formal program was undertaken within the methods classes after establishing rationale for using SSR. In this program, subjects read for 15 minutes per day for three days per week in class and two other days outside of class. Consequently, students read for one hour and 15 minutes each week. The program lasted five weeks for a total of 25 readings of 15 minutes each.

Subjects were asked to record reading rate in words per minute after each reading. This was accomplished by multiplying the number of pages read by the number of words per page and then dividing the total number of words by 15. The number of words per page was estimated by selecting a page that appeared typical of full pages of print within the text and counting the words on that page. When recording pages read, subjects were asked to count only actual pages of print. For example, chapters usually started with a half page of text and often ended with a half page of text. Words per minute was recorded along with the date after each reading on a chart provided by the instructor.

Subjects were permitted to select books for the program. The only stipulations were that each book be at least 150 pages in length and be either a novel, story of an event(s), or novel. Textbooks and reading material containing short articles were not permitted. The goal was to have the subjects engage continuous text. Textbooks do

not normally provided the lengthy segments of connected text essential for sustained silent reading. Further, textbook study is substantially different from narrative text in that readers must frequently review material, study graphic organizers, make notes in the text, and make provisions to learn key concepts. Consequently, the use of content oriented texts to determine how rate is effected by sustained silent reading was not appropriate.

The subjects were awarded five points for completing the assignment. This translated into 5% of their overall grade for the course. They were strongly advised that in no way would they be graded relative to how fast they read but, rather, the purpose was to determine the effects of SSR on rate for them personally. Further, they were told of the importance of their accurately recording information for the purposes of contributing meaningfully to the study. They were told that they would receive full credit for simply completing the assignments. Since three of the five weekly readings were done in class, completing the overall assignment was relatively easy.

Data were organized in chronological order from the first reading to the 25th reading for all 76 subjects. Means and standard deviations were determined for each reading. In addition, a weekly reading rate was calculated for each individual during each of the five week periods to provide a more stable picture of change and reduce day-to-day variability. This was calculated by summing the reading rates for the five days in a given week and dividing by five. Repeated measures analysis of variance (ANOVA) procedures were used to determine if change occurred from week one to week five.

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Since the independent variable (weeks) was quantitative in nature, trend analysis was performed to assess the functional relationship between the number of weeks in the program and SSR. The significance tests were conducted with the alpha level at .05.

Results

Weekly means and standard deviations were determined. A mean of 242.15 words per minute with a standard deviation of 71.64 words per minute was determined after the first week, the first five readings. Mean reading rates gradually increased with the most substantial increase between the mean for the first week and the mean for the second week, a gain of approximately 19 words per minute. Increases in reading rate were much less substantial after the second week of readings with a final reading rate of 278.3 words per minute recorded for week five. The weekly means are presented in Figure 1.

Insert Figure 1 about here

The overall F-test for the repeated measure ANOVA was statistically significant ($F=16.38$, $df=4, 300$, $p < .05$). This indicated a significant overall change from the first through the fifth weeks. Given the significant overall F-test, tests for linear, quadratic, cubic, and quartic trends were calculated. The linear trend component was statically significant ($F=26.51$, $df=1,75$, $p < .05$). This indicated that there was a linear increase in weekly reading rate across the five week period; i.e. an increase in rate for each

successive week in the program. Although not as strong as the linear trend, there was a statistically significant quadratic trend ($F=9.23$, $df=1,75$, $p < .05$). This was perhaps due to the smaller increase in weekly rates between weeks three and four, when compared to the changes between the other time periods.

Discussion

Data indicate a substantial increase in reading rate over the five week period. Data suggest a strong linear relationship between the number of weeks of participation in the sustained silent reading (natural reading) program and increase in reading rate. Most noteworthy is the large increase between weeks one and two. Reasons for this dramatic increase are, at best, subject to speculation. Perhaps subjects had not engaged in much reading of continuous text and had, instead, been involved in more laborious text book study. The SSR program, in a sense might have "freed them up" to relax and read more fluently. Further, subjects might have simply become more aware of rate since they were recording words per minute. Perhaps this novelty wore off as the readings continued and rate gains stabilized.

Subjects expressed a high level of satisfaction with the sustained silent reading program when anonymously writing evaluations. Gains in reading rate appear substantial, but also entirely reasonable. Consequently, overall analysis of the program suggests that having students engage in sustained silent reading encourages gains in reading speed.

Further research is necessary to determine if such gains appear permanent. This might be accomplished effectively by replicating this experiment at both the beginning of a semester and during the last five weeks of a semester. Given the nature of an experiment of this type, a one time reading rate measure does not seem adequate to determine permanence of reading rate increases. Research of this type might also provide worthwhile evidence concerning effects of SSR on rate among secondary level students. On the other hand, caution is urged when considering measuring rate among elementary grade students who might consider rate as an end in itself and strive mainly to read faster than their classmates. This problem was limited in the present study through explaining the purposes of the research to the subjects.

Evidence reported herein suggests that providing time and otherwise encouraging normal reading (SSR) promotes reading rate. This added to the many advantages already evident as a result of natural reading gives further support for making time for sustained silent reading an integral part of the curriculum.

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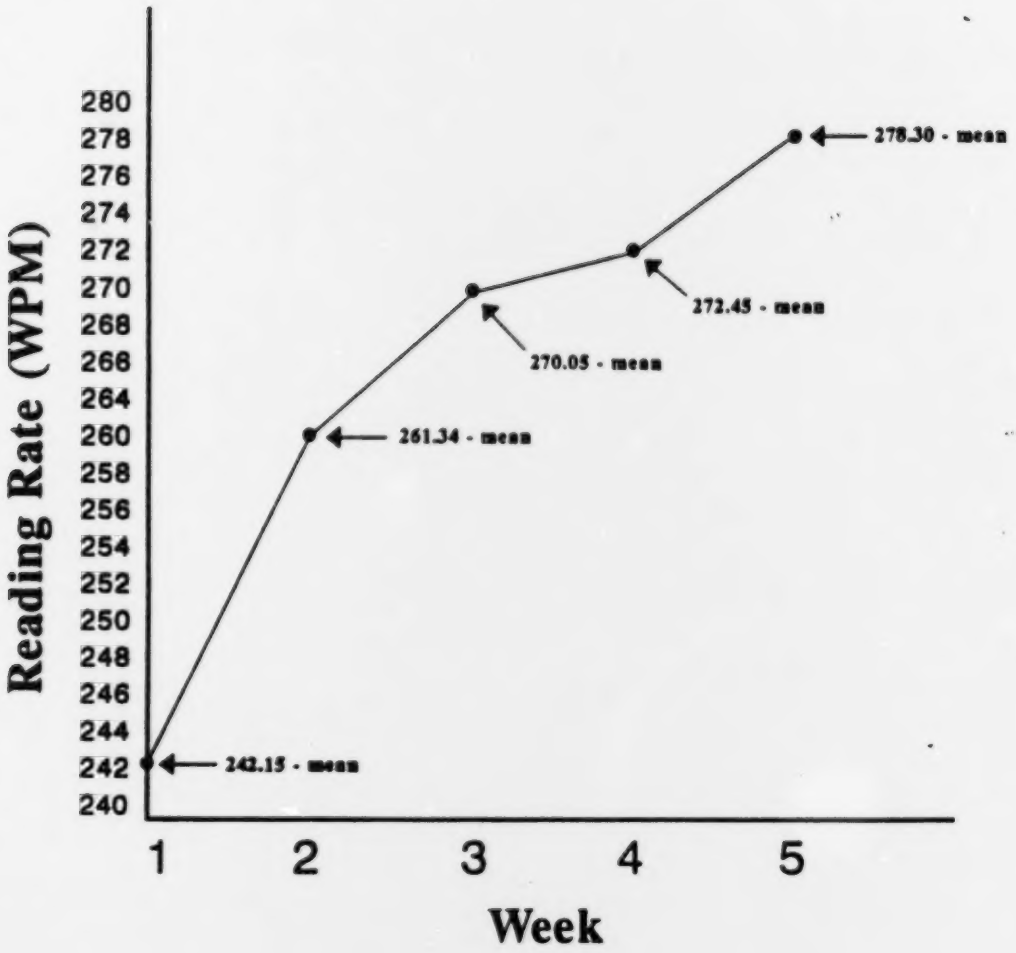

Figure 1. Average Reading Rates For Weeks One Through Five